

# AMENDMENTS TO THE CLAIMS

1-12. (cancelled)

13. (Currently Amended) A process for the preparation of an optionally protected  $\beta$ -L-2'-deoxythymidine comprising the steps of:

- (a) reacting a L-2-deoxyribose with an alcohol to form a L-1-O-alkyl-2-deoxyribose;
- (b) optionally protecting the remaining free hydroxyls of the L-1-O-alkyl-2-deoxyribose to form an optionally protected L-1-O-alkyl-2-deoxyribose;
- (c) reacting the optionally protected L-1-O-alkyl-2-deoxyribose with an acyl halide ~~that generates~~ an anhydrous acid halide ~~in situ~~ to form an optionally protected L-1-halo-2-deoxyribose, wherein the anhydrous acid halide is produced *in situ* by the reaction of an acyl halide with a sub-equivalent amount of a second alcohol;
- (d) coupling the optionally protected L-1-halo-2-deoxyribose with silylated thymine to form an optionally protected  $\beta$ -L-2'-deoxythymidine; and then
- (e) deprotecting the optionally protected  $\beta$ -L-2'-deoxythymidine, if necessary, to obtain a  $\beta$ -L-2'-deoxythymidine.

14. (Original) The process of claim 13, wherein the coupling reaction is performed in chloroform.

15. (Original) The process of claim 13, wherein the silylated thymine is added in excess.

16. (Original) The process of claim 15, wherein the silylated thymine is added in a 2 molar excess.

17. (Currently Amended) A process for the preparation of an optionally protected  $\beta$ -L-2'-deoxyuridine comprising the steps of:

- (a) reacting a L-2-deoxyribose with an alcohol to form a L-1-O-alkyl-2-deoxyribose;

- (b) optionally protecting the remaining free hydroxyls of the L-1-O-alkyl-2-deoxyribose to form an optionally protected L-1-O-alkyl-2-deoxyribose;
- (c) reacting the optionally protected L-1-O-alkyl-2-deoxyribose with an acyl halide ~~that generates an anhydrous acid halide in situ~~ to form an optionally protected L-1-halo-2-deoxyribose, wherein the anhydrous acid halide is produced *in situ* by the reaction of an acyl halide with a sub-equivalent amount of a second alcohol;
- (d) coupling the optionally protected L-1-halo-2-deoxyribose with silylated uracil to form an optionally protected  $\beta$ -L-2'-deoxyuridine; and then
- (e) deprotecting the optionally protected  $\beta$ -L-2'-deoxyuridine, if necessary, to obtain a  $\beta$ -L-2'-deoxyuridine.

18. (Original) The process of claim 17, wherein the coupling reaction is performed in chloroform.

19. (Original) The process of claim 17, wherein the silylated uracil is added in excess.

20. (Original) The process of claim 19, wherein the silylated uracil is added in a 2 molar excess.

21-68. (cancelled)

69. (Previously Presented) The process of claim 13 or 17, wherein the alcohol is ethanol.

70. (Previously Presented) The process of claim 13 or 17, wherein the alcohol is methanol.

71. (Previously Presented) The process of claim 13 or 17, wherein the L-2-deoxyribose is reacted with an alcohol in the presence of an acid.

72. (Previously Presented) The process of claim 71, wherein the acid is an organic sulfonic acid.

73. (Previously Presented) The process of claim 72, wherein the acid is toluene sulfonic acid.

74. (Previously Presented) The process of claim 72, wherein the acid is methyl sulfonic acid.

75. (Previously Presented) The process of claim 71, wherein the acid is a carboxylic acid.

76. (Previously Presented) The process of claim 13 or 17, wherein an acid scavenger is used to quench the acid after formation of the L-1-O-alkyl-2-deoxyribose is complete.

77. (Previously Presented) The process of claim 76, wherein the acid scavenger is selected from the group consisting of triethylamine, pyridine and dimethylaminopyridine.

78. (Previously Presented) The process of claim 13 or 17, wherein the remaining free hydroxyls are protected with an acyl group.

79. (Previously Presented) The process of claim 78, wherein the acyl group is toluoyl.

80. (Previously Presented) The process of claim 13 or 17, wherein the acid halide is an acid chloride.

81. (Previously Presented) The process of claim 80, wherein the acid chloride is acetyl chloride.

82. (Canceled).

83. (Currently Amended) The process of claim 13 or 17 [[82]], wherein the second alcohol is methanol.

84. (Previously Presented) The process of claim 13 or 17, wherein the optionally protected L-1-halo-2-deoxyribose crystallizes as it forms.

85. (Previously Presented) The process of claim 13 or 17, wherein the  $\beta$ -L-2'-deoxythymidine is deprotected by reaction with sodium methoxide in methanol.